

P17951.A01

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants : David L. WHITMORE et al.
Appl. No. : 09/652,009
Filed : August 31, 2000
For : METHOD AND APPARATUS FOR ROUTING DATA OVER
MULTIPLE WIRELESS NETWORKS



Group Art Unit: 2152

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INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner of Patents
Washington, D.C. 20231

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Sir:

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In accordance with the duty of disclosure under 37 C.F.R. 1.56, 1.97-1.98, applicants call the following documents to the Examiner's attention:

- U.S. Patent No. 5,412,375, to WOOD, issued May 2, 1995;
- U.S. Patent No. 5,420,574, to ERICKSON et al., issued May 30, 1995;
- U.S. Patent No. 5,452,471, to LEOPOLD et al., issued September 19, 1995;
- U.S. Patent No. 5,537,220, to EZUMI et al., issued July 16, 1996;
- U.S. Patent No. 5,717,737 to DOVIAK et al., issued February 10, 1998; and
- U.S. Patent No. 5,602,843, to GRAY, issued February 11, 1997.
- U.S. Patent No. 5,249,218, to SAINTON, issued September 28, 1993;

U.S. Patent No. 5,353,334, to O'SULLIVAN, issued October 4, 1994;

U.S. Patent No. 5,367,563, to SAINTON, issued November 22, 1994;

U.S. Patent No. 5,127,041, to O'SULLIVAN, issued June 30, 1992;

U.S. Patent No. 4,972,457, to O'SULLIVAN, issued November 20, 1990; and

U.S. Patent No. 4,697,281, to O'SULLIVAN, issued September 29, 1987.

"KeyWareTM - A Wireless Distributed Computing Environment," Racotek White Paper, RACOTEK, Inc., Minneapolis, MN, 1995;

"MAVRIC 2000: Integrated Data and Voice Communications System," MAVRIC 2000 Performance Specifications Brochure, Metric Systems Corp., Acton, MA, 1991;

"RacoNet: Mobile Data Communication Services Product Catalog," Rev. 1.03, RACOTEK, Inc., Minneapolis, MN, 1993;

"Racotek: Design Considerations for Mobile Data Applications," Racotek 400-0054-00, RACOTEK, Inc., Minneapolis, MN, January 1993;

"RacoNet: Mobile Data Communications Services Price List," Rev. 1.03, RACOTEK, Inc., Minneapolis, MN, 1993;

"MPS II System Component: Mobile System Printer," Racotek Sales Brochure, RACOTEK, Inc., Minneapolis, MN, February 1990;

"MPS II System Component: Mobile System Data Terminal," Racotek Sales Brochure, RACOTEK, Inc., Minneapolis, MN, February 1990;

"MPS II System Component: Adaptive Network Modem," Racotek Sales Brochure,
RACOTEK, Inc., Minneapolis, MN, February 1990;

"Racotek Overview," RACOTEK, Inc., Minneapolis, MN, 1993;

"Unify Your Mobile Data Communications with RacoNet," Racotek Sales Brochure,
RACOTEK, Inc., Minneapolis, MN, 1992;

"The Race is Won by the Fleet," Racotek Sales Brochure, RACOTEK, Inc.,
Minneapolis, MN (publication date unknown);

Datalines, Volume 5, No. 2, RACOTEK, Inc., Minneapolis, MN, April 1993;

Datalines, Volume 5, No. 3, RACOTEK, Inc., Minneapolis, MN, September 1993;

Datalines, Volume 6, No. 1, RACOTEK, Inc., Minneapolis, MN, February 1994;

"RACOTEK/HDC: Operations Booklet for Mobile Data Terminals," RACOTEK,
Inc., Minneapolis, MN, 1993;

I. SHPANCER et al., "Open Data-On-Voice Systems for SMRs," RACOTEK - Radio
Computer Technologies, presented at NABER's 1990 Annual Meeting, May 9-12, Tampa,
FL, 1990;

"How to Hold Together a Business that Heads Off in Every Direction," RaCoNet
Networking Software," Racotek Sales Brochure, RACOTEK, Inc., Minneapolis, MN
(publication date unknown);

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Robert J. FRASER, "The MTS-Part II," Communications, pp. 52-55, August 1991;

"Wireless Data Communications and RAM Mobile Data," RAM Mobile Data Sales Brochure, RAM Mobile Data U.S.A., 1992;

"RAM Mobile Data: Field Service," RAM Mobile Data Sales Brochure, RAM Mobile Data U.S.A., 1992;

"Market Opportunities for System Integrators, Mobile Data Terminal Manufacturers, Radio and Modem Manufacturers, and Software Developers," RAM Mobile Data Sales Brochure, RAM Mobile Data U.S.A. (publication date unknown);

On the Air, a quarterly publication of ARDIS, Lincolnshire, IL, Vol. 3, Spring 1993;

On the Air, a quarterly publication of ARDIS, Lincolnshire, IL, Vol. 4, July 1993;

On the Air, a quarterly publication of ARDIS, Lincolnshire, IL, Vol. 5, Fall 1993;

Robert B. EULER, "Making the Mobile Communications Connection," MSM Magazine, June 1990;

"ARDIS Marks First Birthday of Network Operation," ARDIS News Release, ARDIS, Lincolnshire, IL, April 1991;

"ARDIS Extends its Reach into Canada," ARDIS News Release, ARDIS, Lincolnshire, IL, February 1992;

"ARDIS Focuses on Sales Force Automation," ARDIS News Release, ARDIS, Lincolnshire, IL, October 1993;

"ARDIS Sets the Standard for Wireless Data Communications," ARDIS News Release, ARDIS, Lincolnshire, IL (publication date unknown);

"How Does One Overnight Delivery Service Guarantee Overnight Success?," ARDIS Sales Advertisement, ARDIS, Lincolnshire, IL (publication date unknown);

"ServiceXpress," ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"ARDIS is the First Radio Frequency Network for the Motorola Envoy Wireless Personal Communicator," Communications by Ardis, ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"ARDIS," Company Profile Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"ARDISmailSM 100: The Wireless E-Mail Package," ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"Congratulations. You Have the Sale!," ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"Wireless Solutions Can Mean the Difference...," ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

"Achieving the Highest Level of Productivity with New Thinking and a New Vision," ARDIS Sales Brochure, ARDIS, Lincolnshire, IL (publication date unknown);

Form S-1 Registration Statement of RACOTEK Inc. (with exhibits), as filed with the Securities and Exchange Commission on October 22, 1993; and

Amendment No. 1 to Form S-1 Registration Statement of RACOTEK Inc., as filed with the Securities and Exchange Commission on November 4, 1993.

The following materials were cited in the Supplemental Information Disclosure Statement filed May 14, 1997 in commonly assigned U.S. Patent No. 5,717,737:

Ericsson GE, "Mobile Data System Evolution", publication date unknown;

Ericsson GE, "Mobile Data Questions & Answers", dated March 3, 1994;

Ericsson GE, "Private Radio Systems EDACS[®] Data Advantage[™] Technical Description", publication date unknown;

Motorola, Inc., "Integrated Voice and Data System Description", publication date unknown;

Motorola, Inc., "VRM-100 Vehicular Radio Modem", publication date unknown;

Motorola Private Systems Division Land Mobile Products Sector, "VRM 100 Vehicular Radio Modem For Integrated Voice and Data Operation on Smartnet and SmartZone Trunked Radio Systems and Conventional Radio Systems - Product Description", April 5, 1994; and

Motorola Mobile Data Division, "RPM Native Mode Interface R1.1 Reference Manual", published September, 1992.

In addition, the following documents were cited by the Examiner in commonly assigned U.S. Patent No. 5,717,737:

U.S. Patent No. 5,457,680 to KAMM et al., issued October 10, 1995;

U.S. Patent No. 5,404,392 to MILLER et al., issued April 4, 1995;

U.S. Patent No. 5,379,448 to AMES et al., issued January 3, 1995;

U.S. Patent No. 5,212,724 to NAZARENKO et al., issued May 18, 1993;

U.S. Patent No. 4,969,184 to GORDON et al., issued November 6, 1990; and

U.S. Patent No. 4,833,701 to COMROE et al., issued May 23, 1989.

Applicants also bring to the Examiner's attention a PCT International Search Report issued January 28, 1999, for related International Application No. PCT/US98/18491; as well as a Written Opinion, dated August 10, 1999, and International Preliminary Examination Reports, dated October 14, 1999 and November 19, 1999, respectively, for related International Application No. PCT/US98/18491. The Written Opinion and the International Preliminary Examination Report cite:

U.S. Patent No. 5,559,860 to MIZIKOVSKY, issued of September 24, 1996;

U.S. Patent No. 5,598,412 to GRIFFITH et al., issued on January 28, 1997; and

U.S. Patent No. 5,610,974 to LANTTO, issued March 11, 1997.

In the PCT International Search Report, U.S. Patent No. 5,457,680 to KAMM et al., issued on October 10, 1995, was cited as a Y-Category document (i.e., document of particular relevance; the claimed invention cannot be considered to involve an inventive step

when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art) with respect to at least claims 1-41 of the PCT Application. Fig. 1, col. 2, lines 4-11; col. 4, lines 10-35; col. 5, lines 36-43 and 55-58; and col. 12, line 10 to col. 16, line 49 were indicated to be relevant passages; and

U.S. Patent No. 5,504,746 to MEIER, issued on April 2, 1996, was cited as a Y-Category document with respect to at least claims 1-41 of the PCT Application. Col. 9, line 1 to col. 17, line 60 was indicated to be a relevant passage.

The following patents were brought to the attention of the Examiner in commonly assigned U.S. Application No. 08/932,532:

U.S. Patent No. 5,042,082 to DAHLIN, issued August 20, 1991;

U.S. Patent No. 5,257,401 to DAHLIN et al., issued October 26, 1993;

U.S. Patent No. 5,260,988 to SCHELLINGER et al., issued November 9, 1993;

U.S. Patent No. 5,479,480 to SCOTT, issued December 26, 1995;

U.S. Patent No. 5,550,893 to HEIDARI, issued August 27, 1996;

U.S. Patent No. 5,564,077 to OBAYASHI et al., issued October 8, 1996;

U.S. Patent No. 5,697,055 to GILHOUSEN et al., issued December 9, 1997;

U.S. Patent No. 5,710,986 to OBAYASHI et al., issued January 20, 1998;

U.S. Patent No. 5,732,359 to BARANOWSKY, II et al., issued March 24, 1998;

U.S. Patent No. 5,761,623 to LUPIEN et al., issued June 2, 1998;

U.S. Patent No. 5,826,188 to TAYLOE et al., issued October 20, 1998;

U.S. Patent No. 5,870,673 to HAARTSEN, issued February 9, 1999;

U.S. Patent No. 5,878,344 to ZICKER, issued March 2, 1999;

U.S. Patent No. 5,915,214 to REECE et al., issued June 22, 1999;

U.S. Patent No. 5,978,679 to AGRE, issued November 2, 1999;

U.S. Patent No. 5,793,843 to MORRIS issued August 11, 1998; and

U.S. Patent No. 5,802,483 to MORRIS, issued September 1, 1998.

The following patents were cited by the Examiner in commonly assigned U.S.

Application No. 08/932,532:

U.S. Patent No. 5,825,775 to CHIN et al., issued October 20, 1998;

U.S. Patent No. 5,559,860 to MIZIKOVSKY, issued of September 24, 1996;

U.S. Patent No. 5,598,412 to GRIFFITH et al., issued on January 28, 1997;

U.S. Patent No. 5,610,974 to LANTTO, issued March 11, 1997;

U.S. Patent No. 5,566,236 to MELAMPY et al., issued on October 15, 1996;

U.S. Patent No. 5,610,905 to MURTHY et al., issued March 11, 1997;

U.S. Patent No. 5,434,863 to ONISHI et al., issued on July 18, 1995;

U.S. Patent No. 5,828,659 to TEDER et al., issued October 27, 1998;

U.S. Patent No. 5,659,596 to DUNN, issued August 19, 1997;

U.S. Patent No. 5,839,075 to HAARTSEN et al., issued November 17, 1998;

U.S. Patent No. 5,633,873 to KAY et al., issued May 27, 1997;

U.S. Patent No. 5,530,945 to CHAVEZ, Jr. et al., issued June 25, 1996; and

U.S. Patent No. 5,673,268 to SHARMA et al., issued September 30, 1997.

Applicants would also like to bring the following documents to the Examiner's attention:

U.S. Patent No. 5,555,553 to JONSSON, issued on September 10, 1996;

U.S. Patent No. 4,989,230 to GILLIG et al., issued on January 29, 1991;

U.S. Patent No. 5,625,673 to GREWE et al., issued on April 29, 1997;

Japanese Patent Publication No. 63-224422, published on September 19, 1988, along with an English language abstract; and

Japanese Patent Publication No. 3-32125, published on February 12, 1991, along with an English language abstract.

Applicants also bring to the Examiner's attention the following commonly assigned applications, copies of which are provided in accordance with 37 C.F.R. 1.98 (a)(2)(iii):

U.S. Application Number 08/932,532, filed on September 17, 1997; and

U.S. Application Number 09/527,014 filed on March 16, 2000.

Finally, the following excerpt is brought to the Examiner's attention:

HUNT, Craig, "TCP/IP Network Administration" O'Reilly & Associates, Inc., pages 28 - 35 (1992)

Applicants respectfully request that the Examiner consider and cite all of the above documents. Copies of the documents are attached, and all of the documents have been listed on a PTO-1449 Form which is also attached. Accordingly, the Examiner is requested to

initial the appropriate spaces on the attached PTO-1449 Form and to return a copy of the form to the applicants with the next official communication in the present application to confirm consideration of these documents.

Testing and Experimental Activity

Finally, in commonly assigned U.S. Patent No. 5,717,737 applicants brought the following testing and experimental activity prior to the filing of that patent application to the Examiner's attention:

Prior to the filing of the patent application, the assignee (PADCOM, Inc.) participated in test pilot programs to experiment and develop the hardware and software of the invention to which this application is directed. Test pilot programs are standard in the industry and occur later in the development process as part of an overall research and development plan for a new product. The test pilot programs are for the purposes of testing and debugging the hardware and software in a "real world environment," rather than in a controlled laboratory. For the reasons stated below, the test pilot programs relate to experimental activity and do not give rise to a statutory bar under Section 102(b).

The first test pilot program involved an earlier embodiment of the invention which failed to perform adequately for its intended purpose. Throughout the first test pilot program, control and access to the deployed system was restricted and tightly maintained. Further, upon completion of the first test pilot program, all equipment was returned to PADCOM. Following completion of the first test pilot program, PADCOM performed additional testing and development at their own facilities and participated in a second test pilot program to

perform additional testing on the system. The second test pilot program began less than one year prior to filing of the grandparent application.

In order to facilitate the Examiner's consideration of the test programs, applicants have provided below a brief outline of the events related to the first test pilot program. Applicants are aware of certain other materials related to the first test pilot program that they would like to submit for the Examiner's consideration during prosecution of the above-captioned application. However, permission was never granted by the source(s) of the document to submit the documents to the U.S. Patent and Trademark Office because these materials are considered proprietary and confidential by the source(s) of such material. Nonetheless, the documents have been reviewed, and it is noted for the record that they do not disclose a system similar to the system claimed in the present application.

The first test pilot program was based on a requirement to develop and deploy a voice radio and data-over-radio system. A general proposal to meet the requirements was submitted on October 26, 1993. The proposal included plans to develop an operational system to meet the specified requirements. A more specific test criteria and plan were drafted on November 22, 1993. On December 28, 1993, a Purchase Order was sent for the installation of the test pilot system. The Purchase Order was to cover the support services, travel expenses, field service and equipment used during the 90 day test pilot period.

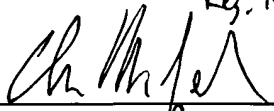
On January 5, 1994, the system hardware and software to be used in the test pilot program was installed in two vehicles for initial testing. Access to the test equipment in the vehicles was tightly controlled, and experimentation and use of the system was limited to

only one person. As of February 22, 1994, the system was not sufficiently stable to begin the test pilot program, and an action plan was developed to identify and resolve the outstanding issues. From May 23, 1994 through May 26, 1994, employees of PADCOM attempted to solve several reproducible errors with both the hardware and software contained in the experimental system. Several features of the system had to be disabled in order to make the system operational. When this system was tested, unsatisfactory performance was realized when several mobile data controllers were attempting to access the host system. As a result, further features of the system were disabled in order to streamline the processing.

Once the test pilot program began on June 2, 1994, further modifications to both the hardware and software were necessary to realize an operational system. The hardware and software were again modified to support communication between the mobile system and an IBM 3270 host network on October 7, 1994. After the test pilot program ended on November 21, 1994, all of the equipment was returned to PADCOM due to unsatisfactory performance and the need for further development of the system.

Should there be any questions or comments, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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December 6, 2000
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